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Typed Name: Kevin D. McCarthy
Date: January 20, 2010

Patent 0-06-165 (16708/US/05)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Yerushalmi-Rozen
Serial no.: 10/587,113
Filed: June 25, 2008
Title: METHOD FOR THE PREPARATION OF DISPERSIONS
OF CARBON NANOTUBES
Examiner: Vickie Marie Nerangis
Art Unit: 1796
Confirmation: 9526

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir/Madam:

After-Final Response and Amendment

This response is in reply to the office action mailed on January 20, 2010.

Amendments

1. Please amend claim 1 as shown in the enclosed document, incorporating the subject matters of claims 2 and 15 into amended claim 1. The amendment restricts the method to a preferred concentration range of the mass ratio between the copolymer and the carbon nanotubes (0.05 to 20), and to preferred fluids (solvents with desired selectivity). Claims 2 and 15 have been canceled.

Claim Rejections – 35 USC §103

2. The Examiner rejects claims 1-17 as being unpatentable over Smalley (US 7,074,310). The applicant traverses the rejection, as explained below.
3. The Examiner states that the cited patent (US/310) mentions PE/PP block copolymers as surfactants capable to separate nanotubes (line 38 of col.8 to line 20 of col. 10), assumingly disclosing sonication, mixing and centrifugation with 1% surfactant (lines 14-31 at col. 26), and 20 wt% nanotubes in mixture (lines 61-63 at col. 26).

It is noted, that the publication relates to separating a mixture of single-wall carbon nanotubes into fractions containing different tube conformations (claim 1, lines 31 at col. 3 to line 10 at col. 4), whereas the instant application relates to dispersing carbon nanotubes while de-agglomerating them into small bundles or single tubes (present claim 1).

The patent suspends nanotubes in a surfactant solution (claims 1 and 7), centrifuges the mixture and continues to work with the supernatant, regardless the ratio between the suspended material and the sediment. The small amount of remaining nanotubes represent a micelle-suspended fraction of 20-25 mg/liter (Example 1, lines 31-32 at column 26) to be further electro-treated. Said surfactant may be any existing surfactant (claims 8-13, col. 9-10), explicitly mentioned are about